



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/587,967

07/31/2006

Peter Ludwig

64349US010

6670

32692

7590

08/05/2011

3M INNOVATIVE PROPERTIES COMPANY

PO BOX 33427

ST. PAUL, MN 55133-3427

EXAMINER

MOORE, WALTER A

ART UNIT

PAPER NUMBER

1789

NOTIFICATION DATE

DELIVERY MODE

08/05/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/587,967
Filing Date: July 31, 2006
Appellant(s): LUDWIG, PETER

Colene H. Blank
Reg. No. 41,056
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 3/29/2011 and 6/20/2011 appealing from the Office action mailed 7/29/2010.

Art Unit: 1789

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1-14 are pending.

Claims 1-14 are rejected.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

WITHDRAWN REJECTIONS

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner.

The provisional double patenting rejections of claims 1-14 over application number 10/588134 are **withdrawn**. As indicated in the Notice of Abandonment, mailed on 11/24/2011, application 10/588134 is abandoned.

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

6,197,397	SHER et al.	3-2001
6,254,582	O'DONNELL et al.	7-2001
6,350,339	SESSIONS	2-2002
2001/0031353	HANNINGTON	10-2001
2003/0211295	SCARBOROUGH	11-2003

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Sher et al., USPN 6,197,397.

Regarding claim 1, Sher teaches a separating layer carrier (release liner, col. 5, ln. 55) comprising a laminar substrate (col. 9, ln. 17-22) and a separating layer applied thereon (silicone release coating, col. 9, ln. 17-22). Sher discloses the carrier comprises a relief structure with raised sections (ridges, fig. 1, #28, col. 5, ln. 65) forming substantially complementary channels in a layer of adhesive (col. 6, ln. 35-38), through which air trapped during adhesion can escape (col. 5, ln. 22). Sher discloses the relief structure is provided, at least in part, by an imprint of a printing material (silicone release coating, col. 9, ln. 17-22).

Regarding the "in a pattern" limitation (claim 1, ln. 5), Sher reads on the limitation is at least two independent ways. First, Sher discloses a pattern (fig. 1, #24, col. 5, ln.

Art Unit: 1789

63) comprising a series of ridges (fig. 1, #28, col. 5, ln. 65) on the substrate. This pattern is formed by an imprint of a printing material (silicone release coating, col. 9, ln. 17-22). Second, Sher discloses the release liners are either coated then embossed or embossed then coated (col. 9, ln. 17-22). Any pattern of release material coating, whether continuous or discontinuous, reads on a pattern. In other words, a continuous coating is a continuous or solid pattern.

Regarding claims 2-4, Sher discloses the substrate comprised paper (col. 9, ln. 17) coated with plastic (col. 9, ln. 17).

Regarding claim 5, Sher teaches the substrate comprises plastic film (col. 9, ln. 17-20).

Regarding claim 6, Sher teaches the substrate comprised plastic film coated with plastic (col. 9, ln. 18-19).

Regarding claim 7, Sher does not expressly state the relief structure is imprinted on the entire surface of the separating layer carrier (release liner). However, Sher implies the relief structure exists on the interlayer support (release liner) in three different ways.

First, Sher implies the relief structure (microembossed pattern) is imprinted entirely on the separating layer carrier (release liner). In Sher, the relief pattern was formed by passing the multiple layer film laminate through an engraved roller apparatus, which formed a relief pattern on the separating layer carrier (release liner, col. 15, ln. 19-21). Since there is a plastic layer in the separating layer carrier (release liner) and there was a relief structure formed on the separating layer carrier (release liner), there

Art Unit: 1789

was a relief structure formed on the plastic coating of the interlayer support (release liner) taught in Sher. Sher does not indicate that there is a margin section to the rollers. Furthermore, the pattern formed on the substrate is a "pattern of continuous raised intersecting microridges" (Col. 15, ln. 31). The lack of a margin on the periphery of the rollers and the continuous pattern implies that the relief pattern is formed on the entire surface of the substrate.

Second, Figure 1 is photograph of a substrate (release liner). Figure 1 shows a relief structure over the entire surface of the substrate in the photograph.

Third, Sher prepared several test samples. The test samples have a substrate with a relief pattern printed on the entire surface of the substrate. Sher conducted tests of the various properties of the adhesive material. In order to form each test sample, Sher passed a substrate (release liner) through a roller with a continuous pattern (col. 15, ln. 31). After passing through the roller assembly, adhesive was applied to each sample (col. 16, Examples 6-8, ln. 66). Then, Sher cut a circular section out of the adhesive material (col. 13, ln. 49-65). Cutting a circular section out of a prepared adhesive material implies that the relief pattern existed on the entire surface of the test sample. In order to form the relief pattern on the adhesive, a relief pattern existed on the substrate contacting the adhesive (col. 3, ln. 35-36; and col. 15, ln. 59-60). So, the relief pattern covered the entire substrate of the test sample.

Regarding claims 8 and 13, Sher prepared an example with interconnected hexagons in a honeycomb arrangement (col. 21. ln. 1).

Regarding claim 9, Sher teaches the shape of the relief pattern could be based on Euclidean or fractal geometry (col. 4, ln. 29). Euclidean geometry includes all shapes of polygons. Furthermore, fractals are complex mathematically defined shapes, which appear to be repeating sequences of random shape distributions.

Regarding claim 10, Sher teaches the relief structure comprises sections having a width of 165 μm (col. 16, ln. 39) and a height between 25 and 30 μm (col. 16, ln. 39).

Regarding claim 11, Sher teaches the area of the polygons was 0.5929 mm^2 (col. 16, Table 1; "Engraved Roll Groove Spacing", $0.77\text{mm} \times 0.77\text{mm} = 0.5929 \text{mm}^2$).

Regarding claim 12, Sher teaches the separating layer carrier comprises a self adhesive material (pressure sensitive adhesive, col. 15, ln. 44).

2. Claims 1-10 and 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Hannington, USPA 2001/0031353.

Regarding claims 1 and 12, Hannington discloses a separating layer carrier comprising a laminar substrate (release liner, fig. 4, #44, p. 6, para 0050), a separating layer (silicone release coating, p. 4, para 0040), and a relief structure (non-adhesive areas, fig. 4, #43, p. 5, para 0050). Hannington discloses channels in the adhesive for air to escape (p. 6, para 0050, last line). Hannington discloses the relief structure (non-adhesive areas) is a printing material (ink, p. 1, para 0017) on the substrate (release liner, fig. 4, #44, p. 6, para 0050).

Regarding the "in a pattern" limitation (claim 1, ln. 5), Hannington expressly discloses the printing material is printed in a pattern (p. 3, para 0031).

Art Unit: 1789

Regarding claims 2-6, Hannington discloses the substrate is a plastic coated paper (polyethylene coated paper, p. 4, para 0040) or a plastic film coated with plastic (polyethylene coated PET, p. 4, para 0040).

Regarding claim 7, Hannington discloses the imprint covers the entire surface (p. 3, para 0031, ln. 4-6).

Regarding claims 8 and 13, Hannington discloses the imprint can be hexagons (p. 3, para 0031).

Regarding claim 9, Hannington discloses random combinations of patterns can be used (p. 3, para 0031).

Regarding claim 10, Hannington discloses the relief structure has a height between 0.3 and 100 microns and a width of between 12 and 250 microns (p. 3, para 0031).

3. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sher et al., USPN 6,197,397.

Sher is relied on as above regarding the section 102 rejection. If Sher does not anticipate the claimed shapes then Sher renders the claimed shapes obvious.

Sher teaches a relief pattern having corner joined polygons (fig. 1 and 3; and col. 15, ln. 30-32). Sher teaches it is within the skill in the art to create any pattern desired, including Eucleadean geometric patterns with any size, shape, and depth (Col. 7, ln. 49-54). Sher suggests that the irregular shape aids in fluid egress from under the adhesive layer as it is applied to a substrate (col. 7, ln. 38-40).

Art Unit: 1789

It is well settled that a particular shape of a prior invention carries no patentable weight unless the applicant can demonstrate that the new shape provides significant unforeseen improvements to the invention. In the instant case, the application does not indicate any new, significant attributes of the invention due to its shape which would have been unforeseen to one of ordinary skill in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to change the shape, taught in Sher, to stochastically shaped and distributed irregular polygons. One skilled in the art would have been motivated to do so in order to improve fluid egress (col. 7, ln. 38-40). MPEP 2144.04 IV.

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hannington, USPA 2001/0031353.

Hannington is relied on as above. If Hannington does not anticipate the shape of claim 9, then Hannington renders the shape obvious.

Hannington discloses the relief structure can be a grid, weave pattern, waffle pattern, diagonal or straight lines, hexagons, rectangles, circles, and triangles (p. 3, para 0031). Hannington also discloses combinations of patterns can be used (p. 3, para 0031). Therefore, Hannington establishes it is within the level of one of ordinary skill in the art to make a variety of shapes to provide fluid egress.

It is well settled that a particular shape of a prior invention carries no patentable weight unless the applicant can demonstrate that the new shape provides significant unforeseen improvements to the invention. In the instant case, the application does not

Art Unit: 1789

indicate any new, significant attributes of the invention due to its shape which would have been unforeseen to one of ordinary skill in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to change the shape, taught in Hannington, to stochastically shaped and distributed irregular polygons. MPEP 2144.04 IV.

5. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sher et al., USPN 6,197,397, in view of Scarborough et al., USPA 2003/0211295.

Note, this rejection is in the alternative to the rejection over Sher above. The alternative presented in this rejection is based on the substitution of embossment, as taught in Sher, with printed ink, as taught in Scarborough.

Regarding claim 1, Sher teaches a separating layer carrier (release liner, col. 5, ln. 55) comprising a laminar substrate (col. 9, ln. 17-22) and a separating layer applied thereon (silicone release coating, col. 9, ln. 17-22). Sher discloses the carrier comprises a relief structure with raised sections (ridges, fig. 1, #28, col. 5, ln. 65) forming substantially complementary channels in a layer of adhesive (col. 6, ln. 35-38), through which air trapped during adhesion can escape (col. 5, ln. 22). Sher discloses the relief structure is made by embossing a pattern on the release liner (col. 3, ln. 52-53).

Scarborough is drawn to a printed article (Abstract). Scarborough discloses a printed pattern (fig. 1, #23, p. 2, para 0027) made from a printing material (fig. 1, #22, p. 2, para 0027). Scarborough discloses the printed pattern creates a three dimensional surface without the cost of embossing (p. 1, para 0008). It would have been obvious to

Art Unit: 1789

one of ordinary skill in the art at the time of invention to substitute a printed pattern, as taught in Scarborough, for the embossing, as taught in Sher, to obtain a separating layer carrier comprising relief structures imprinted with printing material. One of ordinary skill in the art would have been motivated to substitute the printed pattern to save the cost associated with embossing (p. 1, para 0008). Sher and Scarborough are analogous art related three dimensional textured surfaces.

Sher is relied on above regarding claims 2-13.

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Sher et al., USPN 6,197,397 as applied to claims 1-13 above; or Sher et al., USPN 6,197,397, in view of Scarborough et al., USPA 2003/0211295, as applied to claims 1-13 above; and further in view of O'Donnell et al., USPN 6,254,582.

Sher and Sher in view of Scarborough are relied on as above. Sher and Sher in view of Scarborough do not teach the relief structure (silicon coating) is a silicon ink.

O'Donnell is drawn to adhesive articles (panty liners, col. 3, ln. 62) comprising silicone release coating (col. 4, ln. 60). O'Donnell discloses the silicone release coating is applied with gravure coaters or ink jet printing (col. 5, ln. 1). Therefore, O'Donnell discloses silicone ink is a conventional release coating. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use silicone printing ink, as taught in O'Donnell, in the separating carrier, taught in Sher and/or Sher in view of Scarborough, to obtain a separating layer carrier having a silicone printing ink since it has been held to be within the general skill of a worker in the art to select a

Art Unit: 1789

known material on the basis of its suitability for the intended use as a matter of obvious design choice. MPEP § 2144.07.

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hannington, USPA 2001/0031353, in view of Sessions, USPN 6,350,339.

Hannington is relied on as above.

Hannington does not disclose silicone printing ink.

Sessions is drawn to a means to improve the release of an adhesive layer (col. 8, ln. 53-56). Sessions teaches printing ink lines over an adhesive layer (col. 8, ln. 53-54). Sessions discloses the ink contains silicone (col. 4, ln. 11-12). Sessions discloses the ink provides interruption of the adhesive layer to facilitate removal (col. 8, ln. 55-56). It would have been obvious to one of ordinary skill in the art at the time of invention to use silicone ink, as taught in Sessions, in the separation layer carrier, taught in Hannington, to obtain a separating layer carrier comprising silicone ink. One of ordinary skill in the art would have been motivated to use silicone ink because it deadens the adhesive and facilitates adhesive removal (Sessions, col. 8, ln. 55-61).

(10) Response to Argument

First Ground of Rejection: Claims 1-13 are rejected under 35 USC 102(b) as anticipated by Sher, et al., USPN 6,197,397.

Appellant argues the silicone release coating in Sher is a continuous coating, not the primary provider of the relief pattern (Appeal Brief, p. 4, last line). Examiner is not

Art Unit: 1789

persuaded by this argument. The claims recite that at least part of the relief structure is formed by an imprint of printing material (claim 1, ln. 4-5). Sher discloses a material (silicone release coating). The release coating is embossed to form a pattern. Therefore, the release coating is at least a part of the relief structure.

Appellant argues Sher fails to disclose a printed material in a pattern (appeal brief, p. 5, first full para). Examiner is not persuaded by this argument. The coating of silicone on the release liner represents a continuous pattern. A continuous pattern is a pattern.

Second Ground of Rejection: Claims 1-10 and 12-13 are rejected under 35 USC 102(b) as anticipated by Hannington, USPA 2001/0031352.

Appellant argues Hannington fails to teach a separating layer carrier comprising a laminar substrate and a separating layer carrier applied thereon because the element #43 is printed on the adhesive (appeal brief, p. 5). Examiner is not persuaded by these arguments for several reasons. First, the claims recite the imprint of printing material is on the substrate (claim 1, ln. 5). Hannington discloses a printing material (non-adhesive areas, fig. 4, #43, p. 5, para 0050) on a substrate (release liner, fig. 4, #44, p. 6, para 0050). Furthermore, the method of making the product, i.e. printing material on a substrate or printing material on an adhesive fails to distinguish the claimed product from the product disclosed in the prior art.

Third Ground of Rejection: Claim 9 is rejected under 35 USC 103(a) as unpatentable over Sher, USPN 6,197,397.

Appellant relies on the arguments over claim 1. Appellant makes no arguments specific to claim 9 (appeal brief, p. 5). As discussed above, Examiner is not persuaded by the arguments.

Fourth Ground of Rejection: Claim 9 is rejected under 35 USC 103(a) as unpatentable over Hannington, USPA 2001/0031352.

Appellant relies on the arguments over claim 1. Appellant makes no arguments specific to claim 9 (appeal brief, p. 6). As discussed above, Examiner is not persuaded by the arguments.

Fifth Ground of Rejection: Claims 1-13 are rejected under 35 USC 103(a) as unpatentable over Sher, USPN 6,197,397, in view of Scarborough et al., USPA 2003/0211295.

Appellant argues Scarborough fails to disclose the printed material would form channels in adhesive (appeal brief, p. 6, Fifth Ground of Rejection, ln. 4-6). Examiner is not persuaded by this argument for several reasons. First, Scarborough discloses the printed material creates a textured pattern of ridges and lines (fig. 1, #22, p. 2, para 0027). The embossed pattern in Sher creates a textured pattern of lines and ridges (col. 6, ln. 28-31). Therefore, both Scarborough and Sher disclose a textured pattern. Scarborough discloses printing the pattern saves costs associated with the embossing

Art Unit: 1789

process (p. 1, para 0008). Second, while Scarborough does not disclose all the features of the present claimed invention, Scarborough is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely printing a pattern as a less expensive alternative to embossment, and in combination with the primary reference, discloses the presently claimed invention.

Appellant argues the channel must remain after the removal of the release liner (appeal brief, p. 6, Fifth Ground of Rejection, ln. 8-10). Examiner is not persuaded by this argument. Sher discloses the adhesive maintains air channels formed from patterns on a release liner (col. 7, ln. 64-66). Therefore, Sher suggests the adhesive determines the ability to maintain channels.

Appellant argues that one would not reasonably expect the printed material to remain on the carrier (appeal brief, p. 6, Fifth Ground of Rejection, ln. 9-10). Examiner is not persuaded by this argument for several reasons. First, appellant provides no explanation or evidence to support the assertion. Second, Sher discloses release coating remain on the carrier after removal of the carrier from adhesive (col. 7, ln. 64-col. 8, ln. 3).

Art Unit: 1789

Sixth Ground of Rejection: Claim 14 is rejected under 35 USC 103(a) as unpatentable over Sher, Sher in view of Scarborough and in further view of O'Donnell et al., USPN 6,254,583.

Appellant relies on the arguments over claim 1. Appellant makes no arguments specific to claim 14 (appeal brief, p. 6). As discussed above, Examiner is not persuaded by the arguments.

Seventh Ground of Rejection: Claim 14 is rejected under 35 USC 103(a) as unpatentable over Hannington in view of Sessions, USPN 6,350,339.

Appellant relies on the arguments over claim 1. Appellant makes no arguments specific to claim 14 (appeal brief, p. 6 to p. 7). As discussed above, Examiner is not persuaded by the arguments.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/WM/ Walter Moore, Examiner AU 1789

Conferees:

Art Unit: 1789

SPE Humera Sheikh

/Humera N. Sheikh/

Supervisory Patent Examiner, Art Unit 1789

/ROBERT J. WARDEN, Sr./

Supervisory Patent Examiner, Art Unit 1700